AVAYA

Avaya Solution & Interoperability Test Lab

Application Notes for ATT AMX Alarm Management Server and Avaya Aura® Communication Manager via BRI Interface – Issue 1.0

Abstract

These Application Notes describe the compliance testing of ATT AMX Alarm Management Server with Avaya Aura® Communication Manager. The ATT AMX Alarm Management Server communicates with Avaya Aura® Communication Manager via BRI trunk interface. The compliance testing tested the major functions of the ATT AMX Alarm Management Server product.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

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Solution & Interoperability Test Lab Application Notes
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ATT-AMX-BRI

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1. Introduction

These Application Notes describe the configuration steps required for ATT AMX Alarm Management Server to successfully interoperate with Avaya Aura® Communication Manager and the Avaya R4 DECT base station. The ATT AMX Alarm Management Server generates preconfigured or ad hoc alarms which were signaled to Avaya Aura® Communication Manager as calls via the BRI interface. For the compliance tests described by these Application Notes, ATT AMX Alarm Management Server and Avaya Aura® Communication Manager were configured to operate as follows:

- Each alarm consisted of an audio message and a text message. The text message was sent as the calling party name (which can have a maximum length of fifteen characters) and was thus visible for alarms to local extensions and DECT endpoints (but not PSTN endpoints).
- All alarms were sent as "Priority" calls, and were thus not forwarded to coverage if unanswered by local extensions.
- Alarms were also configured such that the alarm recipient must acknowledge via telephone keypad input, thus preventing alarms which were answered by voicemail systems from being considered as delivered.

For alarms to extensions coupled to GSM endpoints via the Avaya EC500 facility, EC500 was configured to require acknowledgement for calls answered by the GSM endpoint, thus allowing GSM voicemail systems to be ignored.

1.1. Interoperability Compliance Testing

The compliance testing included the following test scenarios:

- Alarm creation via text-to-speech and via telephone input
- Alarm delivery to idle station
- Alarm to busy station
- Alarm to station, no answer
- Alarm to station with coverage enabled, no answer
- Alarm to station with call forwarding enabled
- Alarm to unavailable station
- Alarm to tandem station (both GSM and DECT as twin)
- Alarm to hunt group
- Alarm to multiple endpoints
- Automatic startup after power interruption
- Recovery from interruption to the PBX interface

Where appropriate, each of these tests were performed with local extensions, DECT mobile endpoints, PSTN endpoints, and cellular endpoints.

1.2. Support

Support from Avaya is available at http://support.avaya.com/.

Support for ATT products is available at

- Web-based support: only for accredited partners
- Email: Support@attag.ch
- help desk: +41 44 908 6004

2. Reference Configuration

Figure 1: Reference Configuration

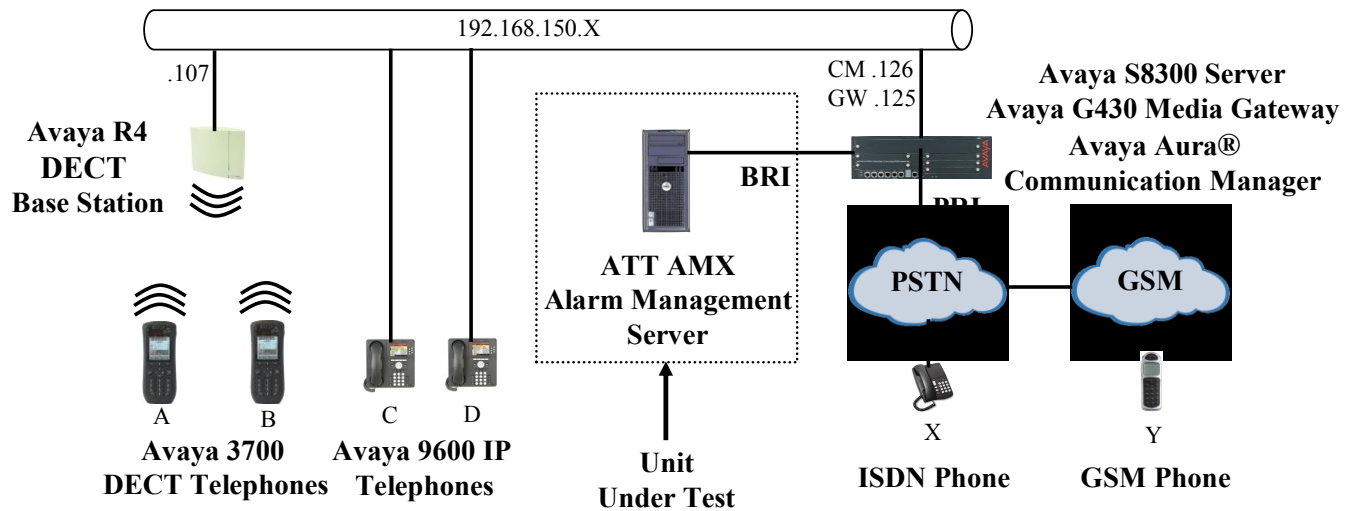The ATT AMX Alarm Management Server in the above diagram interfaces to Avaya Aura®
Communication Manager via the BRI trunk via a Dialogic Icon Diva BRI interface. The ISDN
endpoint is included in the configuration so that alarms can be sent to PSTN endpoints. The
GSM endpoint is included in the configuration so that alarms can be sent to a local extension
which is coupled to a GSM endpoint via EC500.

The following table contains additional information about how each of the telephones contained in the above diagram are configured in Avaya Aura® Communication Manager:

Diagram	Ext	Endpoint
A	10303	Avaya DECT 3720 Telephone
B	10304	Avaya DECT 3725 Telephone
C	10183	Avaya 9630G IP Telephone
D	10094	Avaya 9620 IP Telephone
X	06911111111	ISDN endpoint
Y	+492222222222	GSM endpoint
	20000	AMX Alarm Generation

Table 1: Extensions Used for Testing

3. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Software Component	Version
Avaya Aura® Communication Manager	R015x.02.1.016.4 Update 18365
Avaya G430 Media Gateway	30.14.0
Avaya MM710AP DS1 (PRI) interface	HW05/FW021
Avaya MM720AP BRI interface	HW06/FW008
Avaya 9600 Series Telephones	3.1.1
Avaya 3720 DECT Telephone	3.0.7
Avaya 3725 DECT Telephone	3.0.10
Avaya R4 DECT	Hardware: IPBS1-Y3/PB, IPBS: 3.2.8, Bootcode: 3.0.26
Dialogic Icon Diva BRI – 2m	8.5
ATT AMX Alarm Management Server	Release 9

Table 2: Equipment and Versions Validated

4. Configure Avaya Aura® Communication Manager

The configuration and verification operations illustrated in this section were performed using the Avaya Aura® Communication Manager System Administration Terminal (SAT).

Note that the configuration of the interface to the PSTN is out of the scope of these application notes.

4.1. Verify System-Parameters Special-Applications

Use the **display system-parameters special-applications** command to verify that Communication Manager is configured to meet the minimum requirements to support the special applications used for these tests, as shown by the parameter values in **Table 3**. If these are not met in the configuration, please contact an Avaya representative for further assistance.

Parameter	Usage
X-Station Mobility over IP	The value must be set to "y".

Table 3: Configuration Values for System-Parameters Special-Applications

```
display system-parameters special-applications                Page   4 of   9
                         SPECIAL APPLICATIONS

    (SA8481) - Replace Calling Party Number with ASAI ANI? n
            (SA8500) - Expanded UUI Display Information? n
              (SA8506) - Altura Interoperability (FIPN)? n
              (SA8507) - H245 Support With Other Vendors? n
              (SA8508) - Multiple Emergency Access Codes? n
 (SA8510) - NTT Mapping of ISDN Called-Party Subaddress IE? n
                    (SA8517) - Authorization Code By COR? n


        (SA8520) - Hoteling Application for IP Terminals? n
 (SA8558) - Increase Automatic MWI & VuStats (S8700 only)? n
                (SA8567) - PHS X-Station Mobility over IP? y
     (SA8569) - No Service Observing Tone Heard by Agent? n
                (SA8573) - Call xfer via ASAI on CAS Main? n
        (SA8582) - PSA Location and Display Enhancements? n
            (SA8587) - Networked PSA via QSIG Diversion? n
                    (SA8589) - Background BSR Polling? n
     (SA8608) - Increase Crisis Alert Buttons (S8700 only)? n
                    (SA8621) - SCH Feature Enhancements? n
```

Figure 2: System-Parameters Special-Applications Form, Page 4

4.2. Verify System-Parameters Customer-Options

Use the **display system-parameters customer-options** command to verify that Communication Manager is configured to meet the minimum requirements to support the configuration used for these tests, as shown by the parameter values in **Table 4**. If these are not met in the configuration, please contact an Avaya representative for further assistance.

Parameter	Usage
Maximum Stations (Page 1)	The value must be sufficient to allow the number of stations, including the ATT AMX Alarm Management Server, shown in **Table 1**.
Maximum XMOBILE Stations (Page 1)	The value must be sufficient to allow the number of DECT stations, including the ATT AMX Alarm Management Server, shown in **Table 1**.
Maximum Off-PBX Telephones – EC500 (Page 1)	This parameter must be large enough to support the number of stations which are paired with EC500 endpoints.
Maximum Concurrently Registered IP Stations (Page 2)	The value must be sufficient to allow the number of IP stations shown in **Table 1**
Enhanced EC500 (Page 4)	This parameter must be set to "y".
IP Trunks (Page 4)	This parameter must be set to "y".
ISDN-BRI Trunks (Page 4)	This parameter must be set to "y".
ISDN-PRI (Page 4)	This parameter must be set to "y".

Table 4: Configuration Values for System-Parameters Customer-Options

```
display system-parameters customer-options                    Page   1 of  10
                           OPTIONAL FEATURES

    G3 Version: V15                          Software Package: Standard
      Location: 1                          RFA System ID (SID): 1
      Platform: 26                         RFA Module ID (MID): 1

                                                           USED
                                 Platform Maximum Ports: 900   124
                                       Maximum Stations: 450   18
                               Maximum XMOBILE Stations: 100   3
                      Maximum Off-PBX Telephones - EC500: 100   1
                      Maximum Off-PBX Telephones -   OPS: 100   1
                      Maximum Off-PBX Telephones - PBFMC: 0     0
                      Maximum Off-PBX Telephones - PVFMC: 0     0
                      Maximum Off-PBX Telephones - SCCAN: 0     0
```

Figure 3: System-Parameters Customer-Options Form, Page 1

```
display display system-parameters customer-options                 Page   2 of  10
OPTIONAL FEATURES


IP PORT CAPACITIES                                                 USED
                     Maximum Administered H.323 Trunks: 100   40
             Maximum Concurrently Registered IP Stations: 450   2
               Maximum Administered Remote Office Trunks: 450   0
 Maximum Concurrently Registered Remote Office Stations: 450   0
                Maximum Concurrently Registered IP eCons: 0     0
   Max Concur Registered Unauthenticated H.323 Stations: 0     0
                   Maximum Video Capable H.323 Stations: 0     0
                    Maximum Video Capable IP Softphones: 0     0
                        Maximum Administered SIP Trunks: 100   30
       Maximum Administered Ad-hoc Video Conferencing Ports: 0   0
       Maximum Number of DS1 Boards with Echo Cancellation: 0   0
                            Maximum TN2501 VAL Boards: 0     0
                     Maximum Media Gateway VAL Sources: 1     1
           Maximum TN2602 Boards with 80 VoIP Channels: 0     0
          Maximum TN2602 Boards with 320 VoIP Channels: 0     0
      Maximum Number of Expanded Meet-me Conference Ports: 0   0
```

Figure 4: System-Parameters Customer-Options Form, Page 2

```
display system-parameters customer-options                      Page   4 of  10
                        OPTIONAL FEATURES

    Emergency Access to Attendant? y                          IP Stations? y
          Enable 'dadmin' Login? y
          Enhanced Conferencing? n              ISDN Feature Plus? n
                Enhanced EC500? y       ISDN/SIP Network Call Redirection? n
   Enterprise Survivable Server? n                     ISDN-BRI Trunks? y
       Enterprise Wide Licensing? n                         ISDN-PRI? y
              ESS Administration? n          Local Survivable Processor? n
          Extended Cvg/Fwd Admin? y              Malicious Call Trace? n
       External Device Alarm Admin? n          Media Encryption Over IP? n
 Five Port Networks Max Per MCC? n    Mode Code for Centralized Voice Mail? n
              Flexible Billing? n
  Forced Entry of Account Codes? n                Multifrequency Signaling? y
        Global Call Classification? n    Multimedia Call Handling (Basic)? n
          Hospitality (Basic)? y    Multimedia Call Handling (Enhanced)? n
Hospitality (G3V3 Enhancements)? n          Multimedia IP SIP Trunking? n
                    IP Trunks? y


              IP Attendant Consoles? n
```

Figure 5: System-Parameters Customer-Options Form, Page 4

4.3. Verify System-Parameters Features

Use the **change system-parameters features** command to set required features as shown in the following table.

Parameter	Usage
Distinctive Audible Alerting (Page 6)	Set the ring count parameters as follows. "Internal": 1, "External": 2, "Priority": 3.
Repetitive Call Waiting Tone (Page 10)	Set this to "y".
Repetitive Call Waiting Interval (Page 10)	Set this to the interval that busy handsets should repeat the call waiting tone. Set this to 4 seconds.

Table 5: Configuration Values for System-Parameters Features

```
change system-parameters features                         Page   6 of  18
                    FEATURE-RELATED SYSTEM PARAMETERS
         Public Network Trunks on Conference Call: 5            Auto Start? n
    Conference Parties with Public Network Trunks: 6            Auto Hold? n
 Conference Parties without Public Network Trunks: 6         Attendant Tone? y
          Night Service Disconnect Timer (seconds): 180       Bridging Tone? n
                Short Interdigit Timer (seconds): 3          Conference Tone? n
              Unanswered DID Call Timer (seconds):            Intrusion Tone? n
              Line Intercept Tone Timer (seconds): 30    Mode Code Interface? n
                Long Hold Recall Timer (seconds): 0
                      Reset Shift Timer (seconds): 0
        Station Call Transfer Recall Timer (seconds): 0       Recall from VDN? n
             Trunk Alerting Tone Interval (seconds): 15
                            DID Busy Treatment: tone
                Allow AAR/ARS Access from DID/DIOD? n
                   Allow ANI Restriction on AAR/ARS? n
Use Trunk COR for Outgoing Trunk Disconnect/Alert? n
                7405ND Numeric Terminal Display? n                    7434ND? n
DISTINCTIVE AUDIBLE ALERTING
          Internal: 1   External: 2   Priority: 3
                    Attendant Originated Calls: external
```

Figure 6: System-Parameters Features Form, Page 6

```
change system-parameters features                              Page  10 of  18
                   FEATURE-RELATED SYSTEM PARAMETERS

              Pull Transfer: n           Update Transferred Ring Pattern? n
         Outpulse Without Tone? y          Wait Answer Supervision Timer? n
         Misoperation Alerting? n          Repetitive Call Waiting Tone? y
    Allow Conference via Flash? y   Repetitive Call Waiting Interval (sec): 4
 Vector Disconnect Timer (min):        Network Feedback During Tone Detection? y
                               System Updates Time On Station Displays? n


              Station Tone Forward Disconnect: silence
                      Level Of Tone Detection: precise
         Charge Display Update Frequency (seconds): 30
                      Date Format on Terminals: mm/dd/yy
                   Onhook Dialing on Terminals? n
              Edit Dialing on 96xx H.323 Terminals? n
                 Allow Crisis Alert Across Tenants? n


 ITALIAN DCS PROTOCOL
   Italian Protocol Enabled? n
```

Figure 7: System-Parameters Features Form, Page 10

4.4. Configure IP Node Names

Use the **change node-names ip** command to configure the address to be used as the IP trunk to the Avaya R4 DECT Base Station.

```
change change node-names ip                                   Page   1 of   2
                        IP NODE NAMES
    Name              IP Address
 dect              192.168.150.107
 default            0.0.0.0
 procr             192.168.150.126
```

Figure 8: Node-Names IP Form

4.5. Dial Plan

Use the **change dialplan analysis** command to configure the dial plan as shown in the following table.

Parameter	Usage
Dialed string: "0"	Use "0" as the Feature Access Code (FAC) to access external telephone numbers.
Dialed string: "1"	Five digit numbers starting with "1" are for local extensions.
Dialed string: "2"	Five digit numbers starting with "2" are ATT AMX Alarm Management Server extensions.
Dialed string: "*0"	Strings beginning with "*0" are used for Trunk Access Codes (TAC).
Dialed string: "*8"	The dialed strings beginning with "*8" are used for Feature Access Codes.

Table 6: Dial Plan Analysis Parameters

```
change dialplan analysis                                    Page   1 of  12
                        DIAL PLAN ANALYSIS TABLE
                          Location:  all          Percent Full:    0

     Dialed   Total  Call    Dialed   Total  Call     Dialed   Total  Call
     String   Length Type     String   Length Type     String   Length Type
     0           1    fac
     1           5    ext
     2           5    ext
     *0          4    dac
     *8          3    fac
```

Figure 9: Dialplan Analysis Table Form

4.6. Add Feature Access Codes

Use the **change feature-access-codes** command to allocate feature access codes, as shown in the following table.

Parameter	Usage
Auto Route Selection Access Code, Page 1	Use a "0" to use Automatic Route Selection (ARS) to route PSTN calls over a SIP trunk.
EC500 Self-Administration Access Codes, Page 2	Enter an unused access code.
Enhanced EC500 Activation, Page 2	Enter the code which is to be used to activate EC500.
Deactivation, Page 2	Enter the code which is to be used to deactivate EC500.
Priority Calling Access Code, Page 3	Enter an available feature access code which is assigned to all incoming calls from the ATT AMX Alarm Management Server to indicate that calls are "Priority Calls".

Table 7: Feature Access Code Parameters

```
change feature-access-codes                                     Page   1 of   8
                            FEATURE ACCESS CODE (FAC)
         Abbreviated Dialing List1 Access Code:
         Abbreviated Dialing List2 Access Code:
         Abbreviated Dialing List3 Access Code:
Abbreviated Dial - Prgm Group List Access Code:
                 Announcement Access Code:
                 Answer Back Access Code:
                   Attendant Access Code:
      Auto Alternate Routing (AAR) Access Code:
    Auto Route Selection (ARS) - Access Code 1: 0      Access Code 2:
              Automatic Callback Activation:          Deactivation:
Call Forwarding Activation Busy/DA:        All:        Deactivation:
   Call Forwarding Enhanced Status:        Act:        Deactivation:
                   Call Park Access Code:
                 Call Pickup Access Code:
CAS Remote Hold/Answer Hold-Unhold Access Code:
                 CDR Account Code Access Code:
                   Change COR Access Code:
              Change Coverage Access Code:
         Conditional Call Extend Activation:          Deactivation:
             Contact Closure   Open Code:          Close Code::
```

Figure 10: Feature-Access-Codes Form, Page 1

```
change feature-access-codes                                    Page   2 of   8
                         FEATURE ACCESS CODE (FAC)
                Contact Closure  Pulse Code:

                 Data Origination Access Code:
                   Data Privacy Access Code:
             Directed Call Pickup Access Code:
       Directed Group Call Pickup  Access Code:
     Emergency Access to Attendant Access Code:
       EC500 Self-Administration Access Codes: *83
                   Enhanced EC500 Activation: *81    Deactivation: *82
           Enterprise Mobility User Activation:        Deactivation:
   Extended Call Fwd Activate Busy D/A     All:        Deactivation:
         Extended Group Call Pickup Access Code:
               Facility Test Calls Access Code:
                           Flash Access Code:
          Group Control Restrict Activation:           Deactivation:
                Hunt Group Busy Activation:            Deactivation:
                            ISDN Access Code:
             Last Number Dialed Access Code:
       Leave Word Calling Message Retrieval Lock:
     Leave Word Calling Message Retrieval Unlock:
```

Figure 11: Feature-Access-Codes Form, Page 2

```
change feature-access-codes                                    Page   3 of   8
                         FEATURE ACCESS CODE (FAC)
             Leave Word Calling Send A Message:
           Leave Word Calling Cancel A Message:
 Limit Number of Concurrent Calls Activation:         Deactivation:
            Malicious Call Trace Activation:          Deactivation:
        Meet-me Conference Access Code Change:
        Message Sequence Trace (MST) Disable:

 PASTE (Display PBX data on Phone) Access Code:
 Personal Station Access (PSA) Associate Code:        Dissociate Code:
        Per Call CPN Blocking Code Access Code:
       Per Call CPN Unblocking Code Access Code:

                 Priority Calling Access Code: *80
                         Program Access Code:

   Refresh Terminal Parameters Access Code:
         Remote Send All Calls Activation:            Deactivation:
            Self Station Display Activation:
                 Send All Calls Activation:           Deactivation:
        Station Firmware Download Access Code:
```

Figure 12: Feature-Access-Codes Form, Page 3

4.7. Add Stations

4.7.1. Add Mobile Stations

Use the **add station** command to add an extension for each of the mobile extensions listed in **Table 1** using the parameters shown in the following table.

Parameter	Usage
Type	Enter "XMOBILE" for an analog telephone.
Name	Enter an appropriate name to identify the station.
XMOBILE Type	Enter "DECT".
Mobility Trunk Group	Enter the number of the trunk group which has been allocated in **Section 4.9.1** for connection to the Avaya R4 base station.
Cell Phone Number	Enter the number allocated to this station.
Mapping Mode	Enter "both".
Length of Display	Enter "12x3".

Table 8: Mobile Station Parameters

```
add station 10303                                         Page   1 of   4
                                 STATION

Extension: 10303                      Lock Messages? n           BCC: 0
     Type: XMOBILE                     Security Code:              TN: 1
                                     Coverage Path 1:            COR: 1
     Name: extn 10303                 Coverage Path 2:           COS: 1
                                     Hunt-to Station:
STATION OPTIONS
                                        Time of Day Lock Table:


        XMOBILE Type: DECT                Message Lamp Ext: 10303
       Display Module? y              Message Waiting Type: ICON
     Display Language: english         Length of Display: 12x3
  Mobility Trunk Group: 8                     Calls Allowed: all
    Configuration Set:

 CELL PHONE NUMBER MAPPING
          Dial Prefix:
    Cell Phone Number: 10303
          Mapping Mode: both
```

Figure 13: Mobile Station Form

4.7.2. Add IP Stations

Use the **add station** command to add an extension for each of the IP extensions listed in **Table 1** using the parameters shown in the following table.

Parameter	Usage
Type (Page 1)	Enter endpoint type as shown in **Table 1**.
Name (Page 1)	Enter an appropriate name to identify the station.
Security Code (Page 1)	Enter an appropriate security code for the station.
EC500 (Page 4)	Add an EC500 button to activate/deactivate EC500.

Table 9: IP Station Parameters

```
add station 10094                                        Page   1 of   5
                              STATION

Extension: 10094                   Lock Messages? n            BCC: 0
    Type: 9620                     Security Code: 123456        TN: 1
    Port: S00006                 Coverage Path 1:              COR: 1
    Name: extn 10094             Coverage Path 2:              COS: 1
                                 Hunt-to Station:
STATION OPTIONS
                                      Time of Day Lock Table:
             Loss Group: 19      Personalized Ringing Pattern: 1
                                        Message Lamp Ext: 10094
         Speakerphone: 2-way         Mute Button Enabled? y
      Display Language: english
 Survivable GK Node Name:
        Survivable COR: internal         Media Complex Ext:
   Survivable Trunk Dest? y                  IP SoftPhone? n




                                      Customizable Labels? y
```

Figure 14: IP Station Form

```
add station 10094                                              Page   4 of   5
                               STATION
 SITE DATA
      Room:                                        Headset? n
      Jack:                                        Speaker? n
     Cable:                                       Mounting: d
     Floor:                                    Cord Length: 0
  Building:                                      Set Color:

ABBREVIATED DIALING
    List1:                   List2:                    List3:




BUTTON ASSIGNMENTS
 1: call-appr                        4: priority
 2: call-appr                        5: ec500       Timer? n
 3: call-appr                        6:


    voice-mail Number:
```

Figure 15: IP Station Form

4.8. Configure EC500

Enter the **change telecommuting-access** command to specify an available extension that is to be dialed from mobile phones to perform EC500 commands.

```
change telecommuting-access                              Page   1 of   1
                          TELECOMMUTING ACCESS

                 Telecommuting Access Extension: 10299
```

Figure 16: Telecommuting-Access Form

Enter the **change off-pbx-telephone configuration-set** command to define a configuration set to be used by GSM endpoints, using the parameters shown in the following table.

Parameter	Usage
Configuration Set	Select an available configuration set number.
Configuration Set Description	Enter a descriptive name to identify the configuration set.
Confirmed Answer	Set this value to "y", so that EC500 alarm calls to GSM endpoints must be acknowledged via keypad input.
Timeout	Select an appropriate time to accommodate human response time.

Table 10: EC500 Feature Access Code Parameters

```
change off-pbx-telephone configuration-set 1                     Page   1 of   1



                               CONFIGURATION SET: 1

                  Configuration Set Description: GSM
                              Calling Number Style: network
                               CDR for Origination: phone-number
               CDR for Calls to EC500 Destination? y
                          Fast Connect on Origination? n
                       Post Connect Dialing Options: dtmf
                    Cellular Voice Mail Detection: none
                                  Barge-in Tone? n
                       Calling Number Verification? n
            Call Appearance Selection for Origination: primary-first
                              Confirmed Answer? y Timeout (seconds): 10

 Use Shared Voice Connections for Second Call Answered? n
Use Shared Voice Connections for Second Call Initiated? n
```

Figure 17: GSM Off-Pbx-Telephone Configuration-Set Form

Enter the **change off-pbx-telephone configuration-set** command to define a configuration set to be used by DECT endpoints, using the parameters shown in the following table.

Parameter	Usage
Configuration Set	Select an available configuration set number.
Configuration Set Description	Enter a descriptive name to identify the configuration set.
Confirmed Answer	Set this value to "n" so that EC500 alarm calls to DECT endpoints need not be acknowledged via keypad input. It is assumed that DECT endpoints are not configured for voicemail coverage.

Table 11: EC500 Feature Access Code Parameters

```
change off-pbx-telephone configuration-set 2                      Page   1 of   1



                              CONFIGURATION SET: 2

                   Configuration Set Description: DECT
                             Calling Number Style: network
                             CDR for Origination: phone-number
             CDR for Calls to EC500 Destination? y
                     Fast Connect on Origination? n
                     Post Connect Dialing Options: dtmf
                     Cellular Voice Mail Detection: none
                                    Barge-in Tone? n
                     Calling Number Verification? y
            Call Appearance Selection for Origination: primary-first
                                 Confirmed Answer? n

 Use Shared Voice Connections for Second Call Answered? n
Use Shared Voice Connections for Second Call Initiated? n
```

Figure 18: DECT Off-Pbx-Telephone Configuration-Set Form

Enter the **change off-pbx-telephone station-mapping** command for the extension to be paired to GSM endpoints, and enter the parameters shown in the table below.

Parameter	Usage
Application	Enter "EC500".
Phone Number	Enter the number of the GSM phone which is to be coupled with this extension. Do not include an additional leading "0" to select ARS.
Trunk Selection	Enter "ARS".
Config Set	Enter the number of the "GSM" configuration set which was configured in **Figure 17**.

Table 12: EC500 Feature Access Code Parameters

```
change off-pbx-telephone station-mapping 10183              Page   1 of   3
                STATIONS WITH OFF-PBX TELEPHONE INTEGRATION

 Station        Application Dial  CC  Phone Number    Trunk       Config  Dual
 Extension                  Prefix                    Selection   Set     Mode
 10183          EC500         -      02222222222      ARS         1
```

Figure 19: GSM Off-Pbx-Telephone Station-Mapping Form

Enter the **change off-pbx-telephone station-mapping** command for the extension to be paired to DECT endpoints, and enter the parameters shown in the table below.

Parameter	Usage
Application	Enter "EC500".
Phone Number	Enter the number of the DECT phone which is to be coupled with this extension.
Trunk Selection	Enter the number of the DECT base station trunk.
Config Set	Enter the number of the "DECT" configuration set which was configured in **Figure 18**.

Table 13: EC500 Feature Access Code Parameters

```
change off-pbx-telephone station-mapping 10094              Page   1 of   3
                STATIONS WITH OFF-PBX TELEPHONE INTEGRATION

 Station        Application Dial  CC  Phone Number    Trunk       Config  Dual
 Extension                  Prefix                    Selection   Set     Mode
 10094          EC500         -      10304            8           2
```

Figure 20: DECT Off-Pbx-Telephone Station-Mapping Form

4.9. Configure Trunk Interfaces

4.9.1. Interface to Avaya R4

The signaling group and trunk group described in this section are closely interrelated. If the signaling group is allocated first, all trunk group parameters must initially be set to blank and entered in a subsequent step, after the trunk group has been added.

Use the **add signaling-group** command to allocate a signaling group to interface to the Avaya R4 using the following parameters:

Parameter	Usage
Group Type	Enter "h.323".
Max number of NCA TSC	Enter a value of 1 or greater.
Max number of CA TSC	Enter a value of 1 or greater.
Trunk Group for NCA TSC	Enter the number of the DECT trunk group allocated in **Figure 22**.
X-Mobility/Wireless Type	Enter "DECT".
Trunk Group for Channel Selection	Enter the number of the DECT trunk group allocated in **Figure 22**.
Near-end Node Name	Enter "procr" to designate the S8300 processor as the near end node name.
Far-end Node Name	Enter "dect" to assign the Avaya R4 base station as the far end node name.
Near-end Listen Port	Specify an otherwise unused port to be used to listen for incoming voice traffic.
Far-end Listen Port	Specify the port assigned to the Avaya R4 as "Local Port" in **Figure 45**.
Direct IP-IP Audio Connections	Enter "y" to allow direct IP-IP endpoint connections (shuffling).

Table 14: Avaya R4 Signaling-Group Parameters

```
add signaling-group 8                                          Page   1 of   6
                             SIGNALING GROUP

 Group Number: 8              Group Type: h.323
                         Remote Office? n          Max number of NCA TSC: 5
                                SBS? n             Max number of CA TSC: 5
     IP Video? n                            Trunk Group for NCA TSC: 8
     Trunk Group for Channel Selection: 8   X-Mobility/Wireless Type: DECT
     TSC Supplementary Service Protocol: a
                      T303 Timer(sec): 10
  H.245 DTMF Signal Tone Duration(msec):
    Near-end Node Name: procr             Far-end Node Name: dect
 Near-end Listen Port: 5210               Far-end Listen Port: 5210
                                         Far-end Network Region: 1
         LRQ Required? n          Calls Share IP Signaling Connection? n
         RRQ Required? n

                                      Bypass If IP Threshold Exceeded? n
                                           H.235 Annex H Required? n
          DTMF over IP: out-of-band    Direct IP-IP Audio Connections? y
 Link Loss Delay Timer(sec): 90              IP Audio Hairpinning? n
       Enable Layer 3 Test? y             Interworking Message: PROGress
H.323 Station Outgoing Direct Media? n  DCP/Analog Bearer Capability: 3.1kHz
```

Figure 21: Avaya R4 Signaling-Group Form

Use the **add trunk-group <n>** command, were <n> is an unused trunk number, to allocate a trunk group to be used as an interface to the Avaya R4 Base Station. Use the parameters shown in the following table.

Parameter	Usage
Group Type (Page 1)	Enter "isdn".
Group Name (Page 1)	Assign a name for identification purposes.
TAC (Page 1)	Enter the Trunk Access Code to be used to identify this trunk.
Direction (Page 1)	Enter "two-way
Carrier Medium (Page 1)	Enter "H.323".
Service Type (Page 1)	Enter "tie".
Member Assignment Method (Page 1)	Enter "auto".
Signaling Group (Page 1)	Enter number of the signaling group allocated in **Figure 21.**
Number of Members (Page 1)	Enter a number large enough to support the maximum number of anticipated simultaneous calls to be made via the DECT trunk.
Codeset to Send Display (Page 2)	Enter "0".
Digit Handling (in/out) (Page 2)	Enter "overlap/enbloc"
Disconnect Supervision In / Out (Page 2)	Enter "y" / "y".
CONNECT Reliable When Call Leaves ISDN (Page 2)	Enter "n".
NCA-TSC Trunk Member (Page 3)	Enter "1".
Send Calling Number (Page 3)	Enter "y".
Format (Page 3)	Enter "unk-pvt"
Send Connected Number (Page 3)	Enter "y".

Table 15: Avaya R4 Trunk-Group Parameters

```
add trunk-group 8                                        Page   1 of  21
                           TRUNK GROUP

Group Number: 8                    Group Type: isdn        CDR Reports: y
  Group Name: DECT                          COR: 1      TN: 1        TAC: *008
   Direction: two-way     Outgoing Display? n       Carrier Medium: H.323
 Dial Access? y           Busy Threshold: 255  Night Service:
Queue Length: 0
Service Type: tie                 Auth Code? n
                                      Member Assignment Method: auto
                                             Signaling Group: 8
                                            Number of Members: 10
```

Figure 22: Avaya R4 Trunk-Group Form, Page 1

```
add change trunk-group 8                                          Page   2 of  21
     Group Type: isdn

TRUNK PARAMETERS
         Codeset to Send Display: 0      Codeset to Send National IEs: 6
                                                   Charge Advice: none
  Supplementary Service Protocol: a    Digit Handling (in/out): overlap/enbloc
      Digit Treatment:                                       Digits:

                                             Digital Loss Group: 18
Incoming Calling Number - Delete:      Insert:              Format:

 Disconnect Supervision - In? y  Out? y
 Answer Supervision Timeout: 0
                              CONNECT Reliable When Call Leaves ISDN? n
```

Figure 23: Avaya R4 Trunk-Group Form, Page 2

```
add trunk-group 8                                                Page   3 of  21
TRUNK FEATURES
         ACA Assignment? n          Measured: none
                                Internal Alert? n        Maintenance Tests? y
                                Data Restriction? n    NCA-TSC Trunk Member: 1
                                    Send Name: n        Send Calling Number: y
           Used for DCS? n                              Send EMU Visitor CPN? n
   Suppress # Outpulsing? n     Format: unk-pvt
                                          UUI IE Treatment: service-provider

                                            Replace Restricted Numbers? n
                                            Replace Unavailable Numbers? n
                                               Send Connected Number: y
                                             Hold/Unhold Notifications? n
           Send UUI IE? y       Modify Tandem Calling Number? n
             Send UCID? n
  Send Codeset 6/7 LAI IE? y
```

Figure 24: Avaya R4 Trunk-Group Form, Page 3

4.9.2. Configure BRI Interface to ATT AMX Alarm Management Server

Use the **add bri-trunk-board** command to configure port 1 of the MM720 interface card to serve as a basic rate interface. Assign those values for this command as shown in the following table. Note that an "un-crossed" Telco interface cable was used to connect the Avaya BRI interface to the ATT AMX BRI interface.

Parameter	Usage
Name (Page 1)	Enter an appropriate name to identify the interface.
Termination Type (Page 1)	Enter "NT".
Interface (Page 1)	Enter "peer-master". Perform this for both ports 1 and 2.
Side (Page 1)	Enter "a". Perform this for both ports 1 and 2.
Interwork Message (Page 2)	Enter "PROGress".

Table 16: Parameters for Bri-Trunk-Board

```
add bri-trunk-board 001v5                            Page   1 of   2
                      ISDN-BRI TRUNK CIRCUIT PACK

          Location: 001V5                        Name: AMX
  Interface Companding: a-law    DCP/Analog Bearer Capability: 3.1kHz
 T3 Timer Length (sec): 15              Termination Type: NT

 Port  Interface   Side  Cntry/Peer  TEI  TSC SS  ETSI       Layer 1 Detect
                         Protocol         Protocol CCBS      Stable? Slips?
   1: peer-master    a       QSIG    0      b     none          y      n
   2: peer-master    a       QSIG    0      b     none          y      n
   3:                        0             none          y      n
   4:                        0             none          y      n
   5:                        0             none          y      n
   6:                        0             none          y      n
   7:                        0             none          y      n
   8:                        0             none          y      n
```

Figure 25: Bri-Trunk-Board Form for BRI Interface

```
add bri-trunk-board 001v5                                   Page   2 of   2
                         ISDN-BRI TRUNK CIRCUIT PACK

Port  Interwork XID  Endpt     SPID       Endpt    SPID      Endpt   Max
      Message  Test? Init?                 ID                 ID    NCA TSC
  1:  PROGress   n     n                                              0
  2:  PROGress   n     n                                              0
  3:  PROGress   n     n                                              0
  4:  PROGress   n     n                                              0
  5:  PROGress   n     n                                              0
  6:  PROGress   n     n                                              0
  7:  PROGress   n     n                                              0
  8:  PROGress   n     n                                              0


   Port Directory    Directory          Port Directory    Directory
        Number        Number                 Number        Number
    1:                                   5:
    2:                                   6:
    3:                                   7:
    4:                                   8:
```

Figure 26: Bri-Trunk-Board Form for BRI Interface

Use the **add trunk-group** command to configure the MM720 interface card to serve as basic rate interface. Assign values for this command as shown in the following table.

Parameter	Usage
Group Type (Page 1)	Specify the Group Type as "isdn"
Group Name (Page 1)	Select an appropriate name to identify the device.
TAC (Page 1)	Specify a trunk access code which can be used to provide dial access to the trunk. This dial string must be contained in the dial plan specified in **Figure 9**.
Outgoing Display (Page 1)	Specify "y".
Carrier Medium (Page 1)	Specify a Carrier Medium of "PRI/BRI", as BRI will be used for this trunk.
Dial Access (Page 1)	Allow dial access to the trunk by dialing the trunk access code.
Service Type (Page 1)	Designate the trunk as a "tie" line to a peer system.
Supplementary Service Protocol (Page 2)	Specify a Supplementary Service Protocol of "a".
Digit Handling (Page 2)	Specify "enbloc/ enbloc" to allow overlap sending of dialed digits.
Trunk Hunt (Page 2)	Specify "cyclical".
Disconnect Supervision (Page 2)	For both the "In" and "Out" parameters, specify "y".
Send Calling Number (Page 3)	Specify "y".
Format (Page 3)	Specify "public".
Send Connected Number (Page 3)	Specify "y".
Send UUI IE (Page 3)	Specify "y".
Group Member Assignments (Page 5)	Assign the interface ports on the MM720 to the trunk group members.

Table 17: Parameters BRI Trunk Group

```
add trunk-group 3                                          Page   1 of  21
                            TRUNK GROUP

Group Number: 3                   Group Type: isdn         CDR Reports: y
  Group Name: AMX                          COR: 1     TN: 1       TAC: *003
   Direction: two-way         Outgoing Display? y       Carrier Medium: PRI/BRI
 Dial Access? y               Busy Threshold: 255  Night Service:
Queue Length: 0
Service Type: tie                    Auth Code? n          TestCall ITC: rest
                   Far End Test Line No:
TestCall BCC: 4
```

Figure 27: Trunk-Group Form for BRI Interface, Page 1

```
add trunk-group 3                                        Page   2 of  21
     Group Type: isdn

TRUNK PARAMETERS
          Codeset to Send Display: 6     Codeset to Send National IEs: 6
        Max Message Size to Send: 260    Charge Advice: none
  Supplementary Service Protocol: a      Digit Handling (in/out): enbloc/enbloc


            Trunk Hunt: cyclical

                                              Digital Loss Group: 13
Incoming Calling Number - Delete:     Insert:              Format:
              Bit Rate: 1200        Synchronization: async   Duplex: full
 Disconnect Supervision - In? y  Out? y
Answer Supervision Timeout: 0
          Administer Timers? n       CONNECT Reliable When Call Leaves ISDN? n
```

Figure 28: Trunk-Group Form for BRI Interface, Page 2

```
add trunk-group 3                                        Page   3 of  21
TRUNK FEATURES
         ACA Assignment? n            Measured: none      Wideband Support? n
                                Internal Alert? n        Maintenance Tests? y
                             Data Restriction? n    NCA-TSC Trunk Member:
                                   Send Name: n         Send Calling Number: y
             Used for DCS? n                         Send EMU Visitor CPN? n
   Suppress # Outpulsing? n     Format: public
Outgoing Channel ID Encoding: preferred     UUI IE Treatment: service-provider

                                           Replace Restricted Numbers? n
                                          Replace Unavailable Numbers? n
                                             Send Connected Number: y
                                           Hold/Unhold Notifications? n
            Send UUI IE? y            Modify Tandem Calling Number? n
           Send UCID? n
Send Codeset 6/7 LAI IE? y                         Ds1 Echo Cancellation? n

   Apply Local Ringback? n          US NI Delayed Calling Name Update? n
Show ANSWERED BY on Display? y
                        Network (Japan) Needs Connect Before Disconnect? n
```

Figure 29: Trunk-Group Form for BRI Interface, Page 3

```
add trunk-group 3                                          Page   5 of  21
                                TRUNK GROUP
                              Administered Members (min/max):   1/4
GROUP MEMBER ASSIGNMENTS               Total Administered Members:   4

        Port    Code Sfx Name        Night          Sig Grp
  1: 001V501   MM720
  2: 001V517   MM720
  3: 001V502   MM720
  4: 001V518   MM720
  5:
  6:
  7:
  8:
  9:
 10:
 11:
 12:
 13:
 14:
 15:
```

Figure 30: Trunk-Group Form for BRI Interface, Page 5

4.10. Configure Call Routing

Routing for calls to DECT stations was done when the DECT station was configured by inserting the DECT trunk number into the station form in **Figure 13**.

4.10.1.   Outgoing Calls to PSTN

Use the **change ars analysis** command to designate that all numbers beginning with "0", be routed to the PSTN via route pattern "9".

```
change ars analysis 0                                      Page   1 of   2
                          ARS DIGIT ANALYSIS TABLE
                            Location:  all      Percent Full:    0

          Dialed         Total     Route    Call  Node  ANI
          String       Min  Max   Pattern   Type  Num   Reqd
           0            7    15       9      pubu        n
```

Figure 31: Ars Analysis Form

Use the **change route-pattern** command to designate that calls using route pattern 9 should be routed to trunk 9, the PSTN trunk.

```
change route-pattern 9                                           Page   1 of   3
                    Pattern Number: 9    Pattern Name: PSTN
                              SCCAN? n      Secure SIP? n
   Grp FRL NPA Pfx Hop Toll No.  Inserted                           DCS/ IXC
   No          Mrk Lmt List Del  Digits                             QSIG
                              Dgts                                   Intw
 1: 9    0                                                          n   user
 2:                                                                 n   user
 3:                                                                 n   user
 4:                                                                 n   user
 5:                                                                 n   user
 6:                                                                 n   user

    BCC VALUE  TSC CA-TSC    ITC BCIE Service/Feature PARM  No. Numbering LAR
    0 1 2 M 4 W    Request                                  Dgts Format
                                                      Subaddress
 1: y y y y y n  n            rest                                       none
 2: y y y y y n  n            rest                                       none
 3: y y y y y n  n            rest                                       none
 4: y y y y y n  n            rest                                       none
 5: y y y y y n  n            rest                                       none
 6: y y y y y n  n            rest                                       none
```

Figure 32: PSTN Route Pattern Form

4.10.2.   Outgoing Calls to ATT AMX Alarm Management Server

Use the **change uniform-dialplan** command to specify that calls to extensions allocated to ATT AMX Alarm Management Server, are to be processed by Automatic Alternate Routing (aar).

```
change uniform-dialplan 0                                        Page   1 of   2
                      UNIFORM DIAL PLAN TABLE
                                                      Percent Full: 0

  Matching                    Insert            Node
  Pattern       Len Del       Digits      Net Conv Num
     2          5    0                    aar  n
```

Figure 33: ATT AMX Alarm Management Server Uniform Dialplan Configuration

Use the **change aar analysis** command to select a route pattern for calls to ATT AMX Alarm Management Server extensions.

```
change aar analysis 0                                           Page   1 of   2
                        AAR DIGIT ANALYSIS TABLE
                            Location:  all         Percent Full:    0

        Dialed          Total     Route    Call   Node  ANI
        String         Min  Max  Pattern   Type   Num   Reqd
           2            5    5      3       aar          n
```

Figure 34: ATT AMX Alarm Management Server Aar Analysis Configuration

Use the **change route-pattern** command to designate that calls to the ATT AMX Alarm Management Server should be routed to the ATT AMX Alarm Management Server trunk configured in **Section 4.9.2**.

```
change route-pattern 3                                         Page   1 of   3
                Pattern Number: 2    Pattern Name: AMX                      SCCAN? n
Secure SIP? n
    Grp FRL NPA Pfx Hop Toll No.  Inserted                       DCS/ IXC
    No          Mrk Lmt List Del  Digits                         QSIG
                             Dgts                                Intw
 1: 3     0                                                       n   user
 2:                                                               n   user
 3:                                                               n   user
 4:                                                               n   user
 5:                                                               n   user
 6:                                                               n   user

     BCC VALUE  TSC CA-TSC    ITC BCIE Service/Feature PARM  No. Numbering LAR
     0 1 2 M 4 W    Request                                  Dgts Format
                                                          Subaddress
 1: y y y y y n  n            rest                                        none
 2: y y y y y n  n            rest                                        none
 3: y y y y y n  n            rest                                        none
 4: y y y y y n  n            rest                                        none
 5: y y y y y n  n            rest                                        none
 6: y y y y y n  n            rest                                        none
```

Figure 35: PSTN Route Pattern Form

4.11. Configure Number Treatment

Use the **change public-unknown-numbering** command to specify what should be used as the Calling Party Number for a specific trunk group. In the first entry below the extension is to be used as the Calling Party Number for the ATT AMX Alarm Management Server trunk. The second entry shows that the extension is to be preceded by the CPN prefix for the PSTN trunk.

```
change public-unknown-numbering 0                              Page   1 of   2
                  NUMBERING - PUBLIC/UNKNOWN FORMAT
                                          Total
Ext Ext              Trk      CPN         CPN
Len Code             Grp(s)   Prefix      Len
                                                  Total Administered: 4
  5   1              3                   5           Maximum Entries: 240
  5   1              9        6990739887 15
  5   1              12                  5
  5   1              83                  5
```

Figure 36: Public-Unknown-Numbering Configuration

Use the **change inc-call-handling-trmt trunk-group** command to insert the Priority Call feature access code (defined in **Figure 12**) so that all calls arriving from the ATT AMX Alarm Management Server trunk will be treated as Priority Calls.

```
change inc-call-handling-trmt trunk-group 3                   Page   1 of   3
                    INCOMING CALL HANDLING TREATMENT
 Service/       Number   Number      Del Insert
 Feature        Len      Digits
 tie            5        1               *80
```

Figure 37: Public-Unknown-Numbering Configuration

5. Configure Avaya R4 Base Station

In its un-configured state, the Avaya R4 base station is set to be a DHCP client. Thus, the MAC address of each base station to be included in the configuration should be entered into the DHCP server together with the IP address, network mask, and default gateway address which are to be assigned to that base station. The Avaya R4 base stations have an integrated HTTP server which allows the input of configuration parameters via a web browser.

Each Avaya R4 base station consists of two independent components:

- A PBX interface component which has a trunk interface to the PBX and an IP interface to one or more radio components.
- A radio component which interfaces to wireless endpoints via DECT and via IP interface to a DECT Base Station containing an active PBX interface component.

The unit which serves as Master has an active PBX interface component and can also have an active radio component. Any additional base stations required to extend radio coverage, each have an active radio component which communicates with the Master via IP, and an inactive PBX interface component. These will hereafter be referred to as Slave base stations.

The tested configuration included only one Master base station in the configuration, and had no Slave base stations.

Enter the URL of the DECT base station into a web browser and select the "System administration" login.
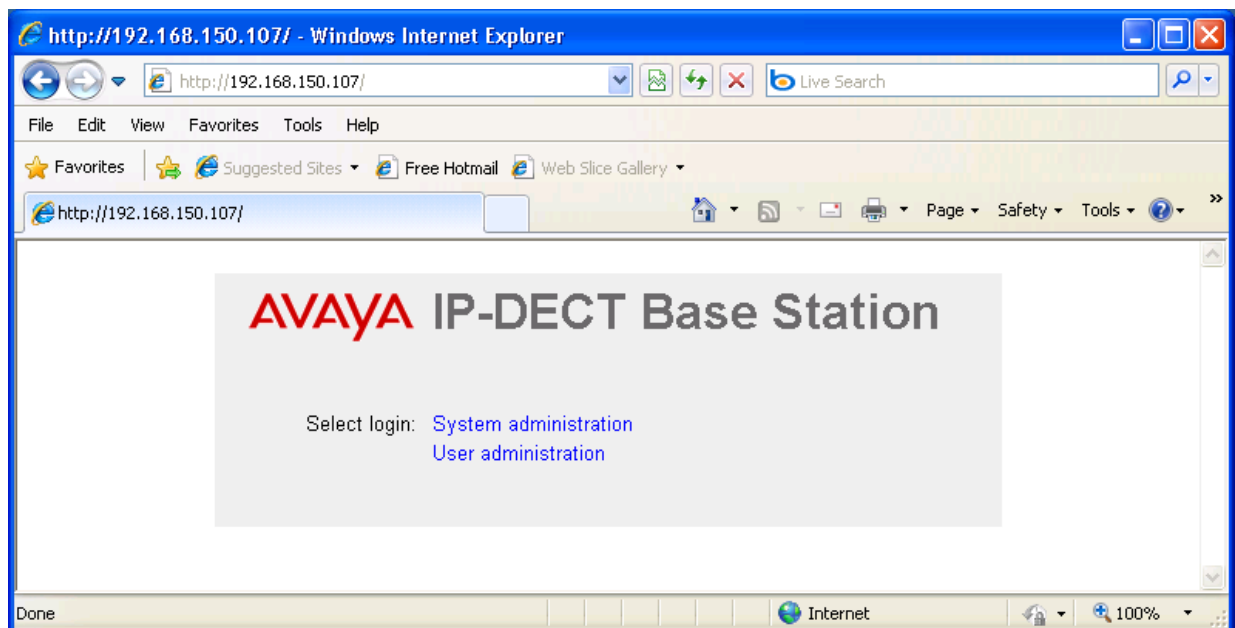
Figure 38: Master Base Selection

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Enter the appropriate credentials and click "OK". For the first-time login, the default password is "changeme". After the initial login, this should be changed to an appropriate value for security reasons.
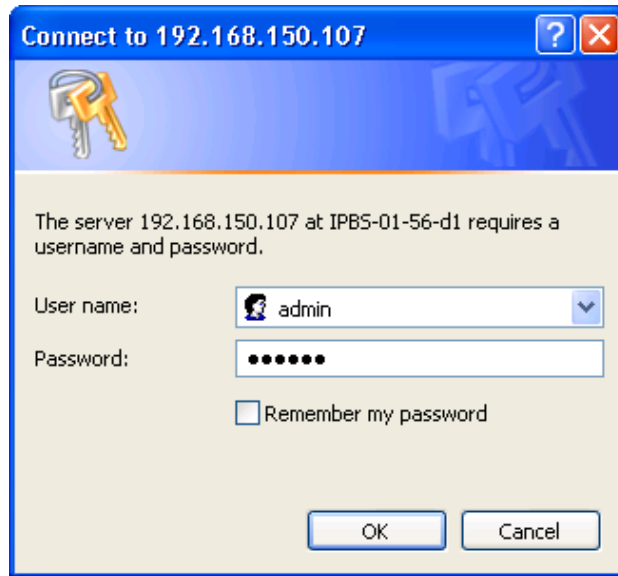
Figure 39: DECT Base Station Login

The initial display shows the **General->Info** tab, which contains version/hardware identification information.
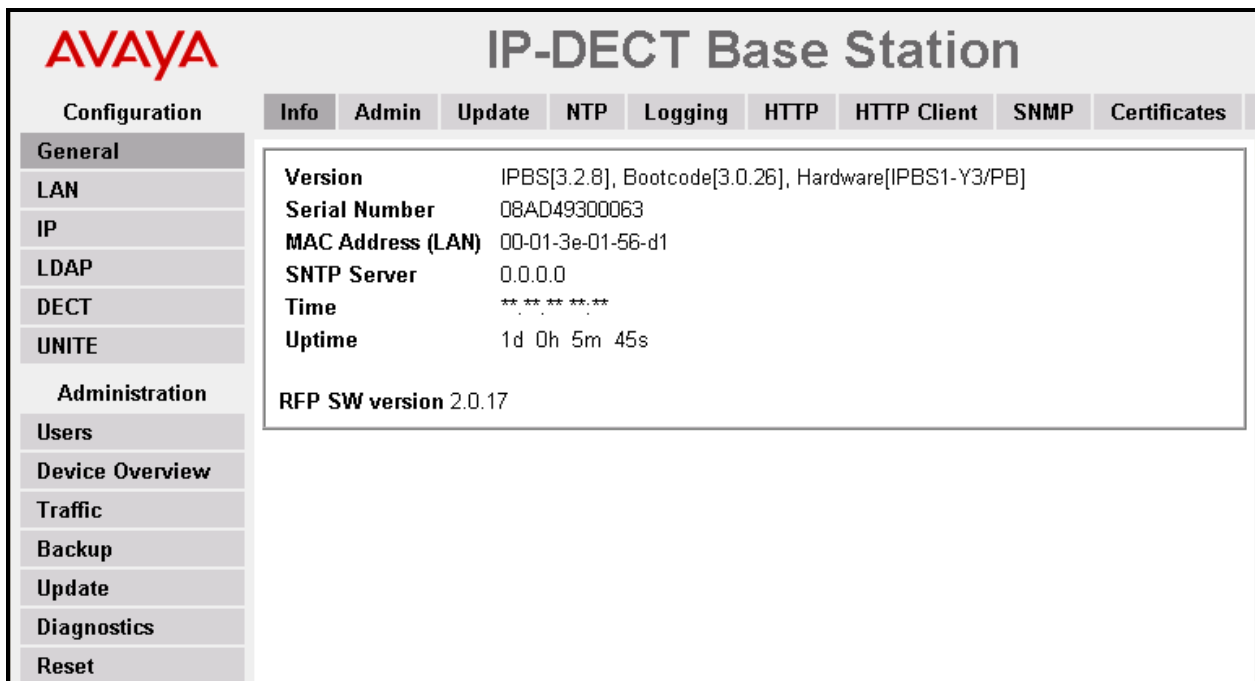
Figure 40: DECT Base Station General -> Info Tab

Select the **LAN->IP** tab. Verify that the IP parameters assigned to the base station correspond to those which are configured in the DHCP reservation.

Figure 41: DECT Base Station LAN -> IP Tab

Select the **General->Admin** tab. Enter the parameters shown in the following table and click "OK".

Parameter	Usage
Device Name	Enter an appropriate name to identify the DECT Base Station.
User Name	Enter "admin", the default administrator user name.
Password	Enter an appropriate password.

Table 18: DECT Base Station General -> Admin Tab Parameters

Figure 42: DECT Base Station General -> Admin Tab

Select the **DECT->Master** tab. Enter the parameters shown in the following table and select "OK".

Parameter	Usage
Mode	Select "Active" from the drop-down menu.
PBX	Select "ACM" from the drop-down menu.
Protocol	Select "H.323/XMobile" from the drop-down menu.

Table 19: DECT Base Station DECT -> Master Tab Parameters

Figure 43: DECT Base Station DECT -> Master Tab

Select the **DECT -> System** tab Enter the parameters shown in the following table and select "OK".

Parameter	Usage
System Name	Enter an appropriate name to identify this base station.
Password / Confirm	Enter an appropriate password for this base station.
Subscriptions	Select "With System AC" from the drop-down menu.
Authentication Code	Enter an appropriate code to be used by endpoints for registration authentication.
Frequency	Select "Europe" from the drop-down menu.
Coder	Select "G711A" from the drop-down menu.
Frame (ms)	Select "20" from the drop-down menu.

Table 20: DECT Base Station DECT -> System Tab Parameters

Figure 44: DECT Base Station DECT -> System Tab

Select the **DECT->Trunks** tab. Enter the parameters shown in the following table and select "OK".

Parameter	Usage
Name	Enter an appropriate name to identify this trunk.
Local Port	Enter the number of the local port which is read by this base station. This must be the same values assigned to "Far-end Listen Port" in **Figure 21.**
CS IP Address	Enter the IP address assigned to the procr interface in **Figure 8**.
CS Port	Enter the number of the local port which is read by this base station. This must be the same values assigned to "Near-end Listen Port" in **Figure 21.**

Table 21: DECT Base Station DECT -> Trunks Tab Parameters

Figure 45: DECT Base Station DECT -> Trunks Tab

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Select the **DECT->Radio** tab. Enter the parameters shown in the following table and select "OK".

Parameter	Usage
Name	Enter the System Name assigned to this base station in **Figure 44**.
Password	Enter the password assigned to this base station in **Figure 44**.
Master IP Address	Enter the IP address assigned to this base station, as displayed by the "Active Settings" in **Figure 41**.

Table 22: DECT Base Station DECT -> Radio Tab Parameters

Figure 46: DECT Base Station DECT -> Radio Tab

Select the **DECT->Air Sync** tab. Enter the parameters shown in the following table, select "OK".

Parameter	Usage
Sync Mode	Select "Master" from the drop-down menu.

Table 23: DECT Base Station DECT -> Air Sync Tab Parameters

Figure 47: DECT Base Station DECT -> Air Sync Tab

Select the **Reset->Idle-Reset** tab. Click "OK".

Figure 48: DECT Base Station Reset -> Idle-Reset Tab

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6. Configure ATT AMX Alarm Management Server

Start the "Dialogic Driver Configuration Manager" from the MS Windows "Start" icon, and enter the parameters shown in the following table.

Parameter	Usage
Switch Type	Select "PBX; Q-SIG" from the drop-down menu.
PBX Type	Select "Generic" from the drop-down menu.
Q-Sig Standard	Select "ISO" from the drop-down menu.
Call Reference Format	Select "Standard" from the drop-down menu.
Channel Identifier Format	Select "Standard" from the drop-down menu.
Operation Mode	Select "TE – Terminal Equipment" from the drop-down menu.

Table 24: Dialogic Driver Configuration Manager Parameters
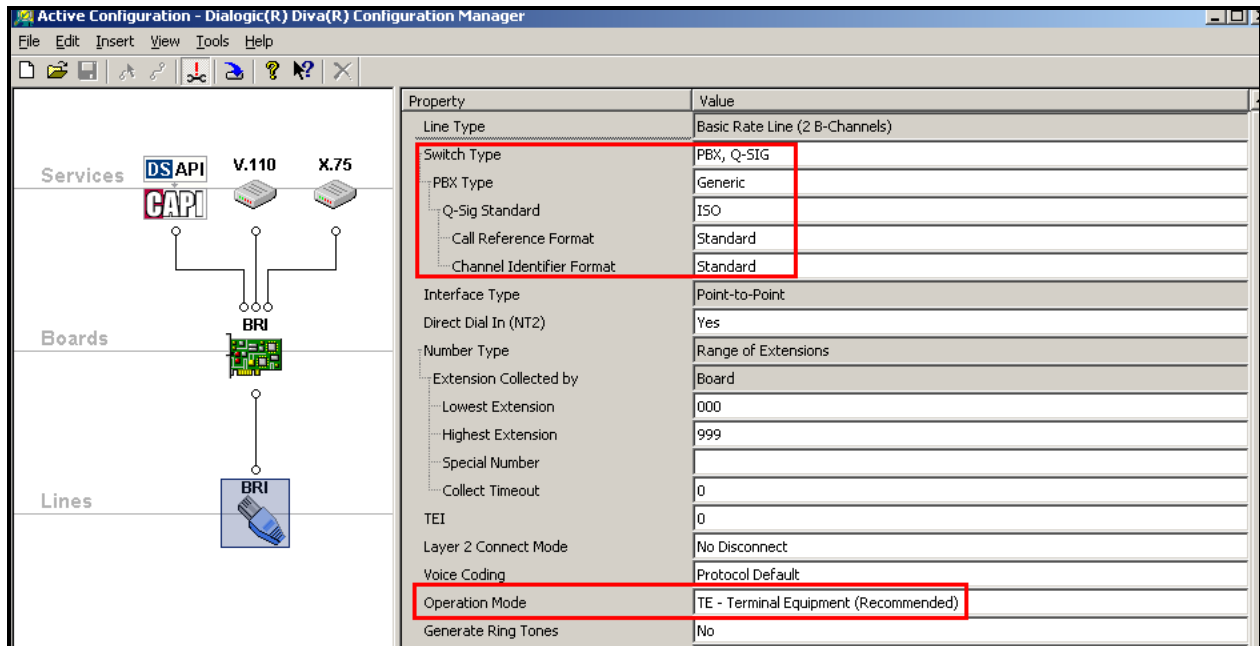
Figure 49: Dialogic Driver Configuration Manager Screen

7. General Test Approach and Test Results

The compliance testing of ATT AMX Alarm Management Server interoperating with Avaya Aura® Communication Manager was performed manually. The tests were functional in nature, and no performance testing was done. The following items were encountered during testing:

- If a local fixed extension which has no available call appearance receives an incoming alarm call, the caller receives a "busy" indication: it makes no difference if it is a "priority" call.
- If an alarm call is made to a diverted (call forwarding) station, the call is diverted: it makes no difference if it is a "priority" call.
- Alarm calls to fixed stations which are paired with DECT stations via EC500, result in calls to DECT stations which do not include alarm text messages.

None of the above issues were considered to be a product failure. With the exception of the above-described items, all tests which were performed produced the expected result. **Section 1.1** contains a list of tests which were performed.

8. Verification Steps

The correct installation and configuration of ATT AMX Alarm Management Server can be verified by performing the steps shown below.

8.1. Verify Communication Manager Configuration

Enter the "status trunk" command from the Communication Manager SAT terminal and verify that all of the trunk members are in the "in-service/idle" state.
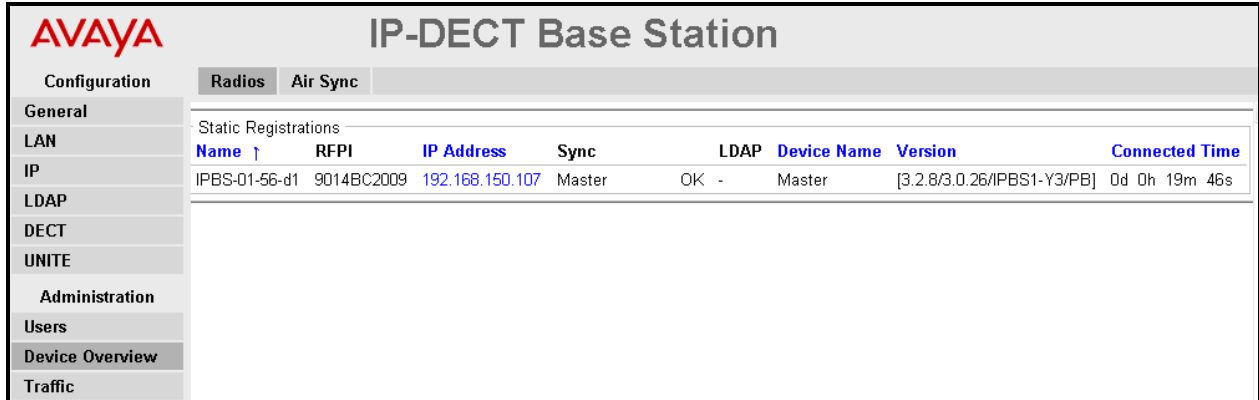
```
status trunk 3


                         TRUNK GROUP STATUS

Member    Port      Service State      Mtce Connected Ports
                                       Busy

0003/001 001V501  in-service/idle     no
0003/002 001V517  in-service/idle     no
0003/003 001V502  out-of-service-NE   no
0003/004 001V518  out-of-service-NE   no
```

Figure 50: Trunk Status

8.2. Verify Avaya R4 Master Base Station Configuration

From the Avaya R4 DECT base station, the **Device Overview** -> **Radios** tab should show current registrations for the base station.

Figure 51: DECT Base Station Radio Status

8.3. Verify ATT AMX Alarm Management Server Configuration

Correct operation of the BRI interface can be confirmed by executing the "Dialogic Line Test"-program, which produces the following output to confirm correct operation when "Line Check" → "Start" is clicked.
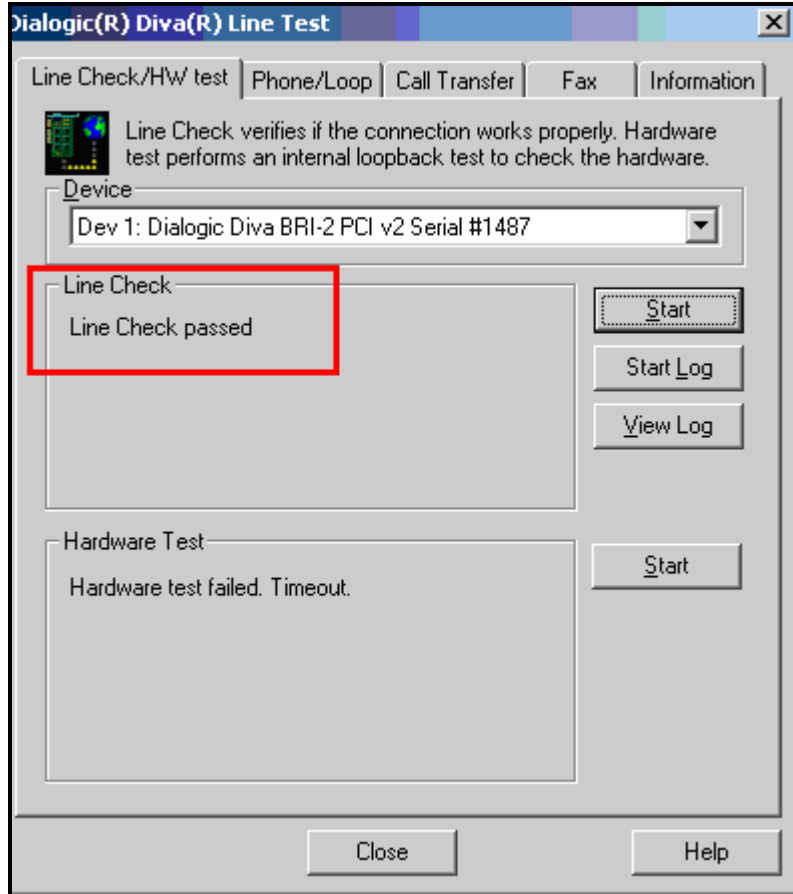
Figure 52: BRI Interface Status

9. Conclusion

These Application Notes contain instructions for configuring Avaya Aura® Communication Manager to connect to the ATT AMX Alarm Management Server via BRI interface. A list of instructions is provided to enable the user to verify that the various components have been correctly configured.

10. Additional References

This section references documentation relevant to these Application Notes. The Avaya product documentation is available at http://support.avaya.com.

[1] *Administering Avaya Aura® Communication Manager*, May 2009, Document Number 03-300509.
[2] *Avaya Aura® Communication Manager Feature Description and Implementation,* May 2009, Document Number 555-245-205.
[3] *Avaya DECT R4 Installation and Administration Manual,* August 2009, Document Number 21-603363.
[4] *AMX Alarm Management Server,* AMX Flyer
[5] *Personal & Alarm Management,* Version 1.2.1-EN, October 2009